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NOTES ON PHOTOGRAPHING A LIVE SPECIMEN OF GAMBEL'S PARTRIDGE.

BY R. W. SHUFELDT.

Plates III–V.

MR. NELSON R. WOOD of the taxidermical department of the U. S. National Museum, owns a beautiful living specimen of Gambel's Partridge (*Callipepla gambeli*). It is a male bird, and at this writing is in full plumage and thoroughly domesticated. He will walk up and down one's arm, feed out of the open hand, and bear stroking without the slightest alarm, or any desire to take flight. Altogether it is one of the best and gentlest little game pets I have ever seen, and has some very interesting traits even in captivity.

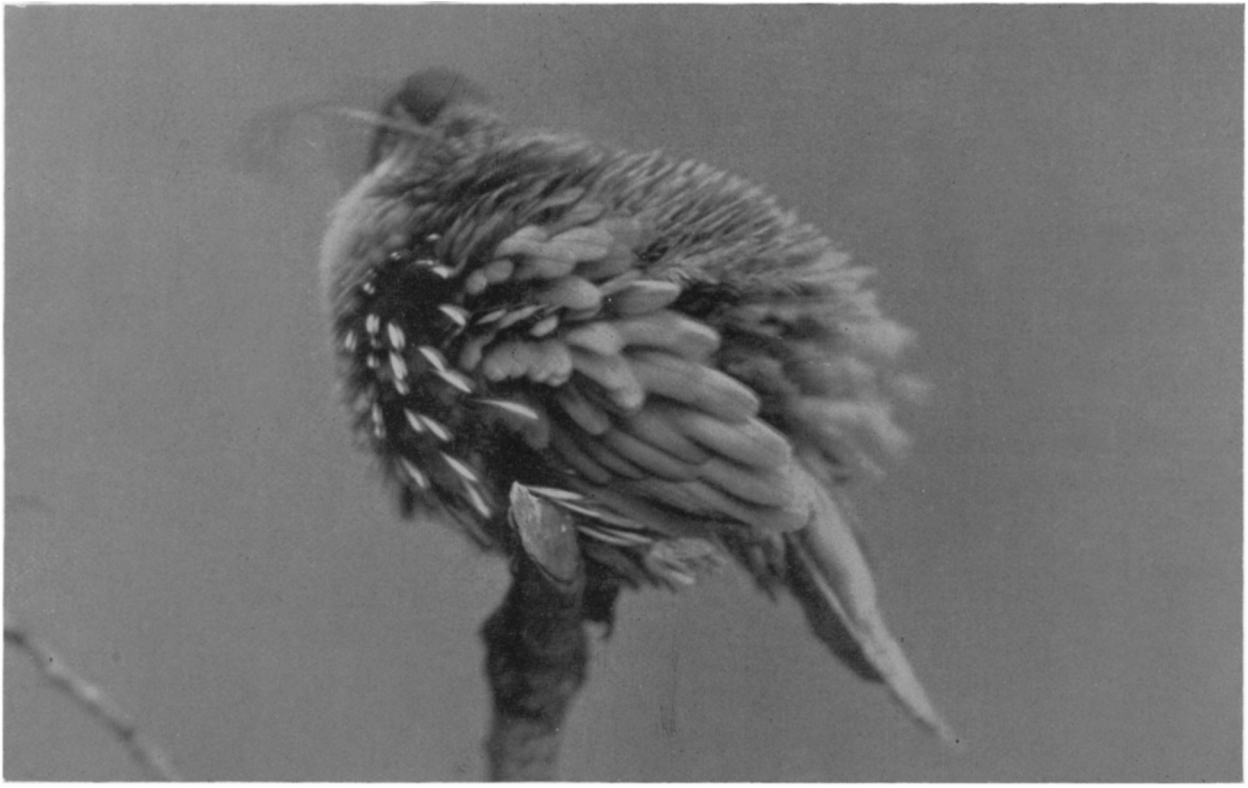
Recently the present writer has been engaged upon a paper treating of scientific taxidermy, and in dealing with the game birds, it became necessary to have some good photographs of living Partridges to compare with various examples of mounted ones in the government collections of the National Museum at Washington. Among other birds, Mr. Wood kindly placed this specimen of Gambel's Partridge at my disposition, for the purpose I have named, and it made a most capital subject. Under my supervision the photographs of it which illustrate this article were made by Mr. Smillie of the photographic department of the National Museum.

We first tried to take the bird walking on a table, but after a number of attempts — at least half a dozen — only one really good result was obtained. At last a limb suggested itself to me, and a suitable one was quickly found. On this the bird rested in a number of easy and natural attitudes, but was continually moving withal, and it required absolutely instantaneous exposures to get a result. After about a dozen more attempts several very good ones were secured, and they present us with a variety of instructive points.

In Plate III, a direct left-lateral view of the bird was obtained, at an instant prior to its elevating its plumage for the purpose of

GAMBEL'S PARTRIDGE (CALLIPEPLA GAMBELI).

FROM A PHOTOGRAPH OF THE LIVE BIRD.



GAMBEL'S PARTRIDGE (CALLIPEPLA GAMBELI).

FROM A PHOTOGRAPH OF THE LIVE BIRD, IN ACT OF PREESING.

COMMON PARTRIDGE (COLINUS VIRGINIANUS). FEMALE.

FROM A PHOTOGRAPH OF A MOUNTED SPECIMEN IN U. S. NATIONAL MUSEUM

preening itself, as shown in Plate IV. One of the feathers of its plume has its shaft broken, and it hangs down, otherwise the picture is perfect. It will be seen that the bird is commencing to close its eyes, and they are almost or quite closed during the act of preening, so as to prevent their being irritated by the feathers. Likewise it will be observed that the elevation of the plumage for this act commences on the crown of the head, and then extends down over the shoulders and upper part of the breast. At this juncture, too, it will be noticed that the anterior line of the facial mask and the line of the lower breast are straight, and that they are parallel to each other.

The next stage is an exceedingly interesting one to get a photograph of, and the result in this case was decidedly successful. It instantaneously follows what is shown in Plate III, and the bird has turned its head, and is scratching the skin of its left shoulder with its bill. It slightly elevates itself upon its legs, and raises all the plumage of the body, as well as the secondaries of the wings. The tail is slightly spread, but its upper and lower coverts enter but very partially into the general act of raising the plumage.

Mr. H. C. Denslow, a very able and observing taxidermist, was, at the time I refer, in the department of birds at the National Museum, and he had made many studies of the postures of living Quails and Partridges with the view of using them in his taxidermical work. He had closely watched specimens of our Common Partridge (*Colinus viginianus*) during the times it preened itself and finally attempted to reproduce one of these in a mounted specimen.

His subject presents a female *Colinus* on the ground. She has been preening, and is here shown just the instant before she gives herself a final shake, prior to bringing the now cleaned and dressed plumage down to her body again. Her head is somewhat sunken between her shoulders, and all her body plumage is elevated. But the wing-feathers are but very slightly raised, and the tail-coverts, very properly, not at all so. Mr. Denslow has never seen my photograph here given in Plate IV, and as it is very probable there is not another one like it in existence, we must believe that, guided as he was by the eye alone, he has attained to a very true result as shown in Plate V.

No doubt *Colinus* frequently assumes just the attitude there exhibited.

At different times I have expressed myself in this journal upon the question of the value of photographs of living birds to the ornithologist, to the taxidermist, and to the artist,—so it will obviate the necessity of my repeating those remarks here.

The kind of photographs to which I had reference are very well exemplified in the Plates illustrating the present contribution,—but how rarely do we yet find them! Most of the attempts I have seen published are of little or no use whatever to the scientist in any department, and even the results themselves are far from pleasing. During my recent studies a vast number of these have been submitted to me for my inspection, and, if possible, use. There has not been one result in fifty of any practical value, and I have been obliged to lay them aside. What we are after is to get *absolutely true* pictures of the forms of birds, and such pictures as can be *used.* More examples than I have been enabled to give in this article will shortly appear in my work on 'Scientific Taxidermy' in the next 'Report of the Smithsonian Institution,' now in press.

TYMPANUCHUS AMERICANUS ATTWATERI BENDIRE. ATTWATER'S OR SOUTHERN PRAIRIE HEN.

BY CHARLES E. BENDIRE.

SINCE my preliminary description of this bird in 'Forest and Stream' (Vol. XL, No. 20, May 18, 1893, p. 425) I have examined considerable additional material and am now compelled to consider it as only a well marked race of *T. americanus.* Its subspecific characters are as follows:—

Smaller than *T. americanus,* darker in color, more tawny above, usually with more pronounced chestnut on the neck; smaller and more tawny

interest to many people besides ornithologists. After a keen competition it was purchased by Sir Vauncey Crewe, of Calke Abbey, Derbyshire, for 300 guineas.

"The collecting of birds' eggs is a pastime which has obtained for some centuries. John Evelyn mentions in his diary for 1681 that when at Norwich he saw the collection of eggs formed by Sir Thomas Browne, but we must come to the end of the eighteenth century before we can trace any collector in possession of an egg of the Great Auk. Early in the present century references to collections containing specimens of this egg become more frequent. There are 68 recorded eggs of the Great Auk, but this number includes several fragmentary remains that can only by courtesy be called eggs. They may fairly be divided into four groups. Ten specimens, from their perfect condition, color, and style of marking, may be put into a class by themselves. Then we have 34 good specimens; 12 are slightly cracked, badly blown, or varnished eggs, while the remaining 14 are imperfect, varying from the eggs that had one end knocked off (probably for the purpose of sucking), like that in the Angers Museum, to the two fragments of the Natural History Museum at South Kensington. Great Britain possesses the larger number of the specimens, for, of the 68, England has 45 and Scotland 3. France comes next with 10 eggs, followed by Germany with 3. Two are in Holland, while Denmark, Portugal, and Switzerland each possess one; there are two in the United States. Again, of the 68 eggs, 29 are in 19 museums, while 21 private owners possess 39 eggs among them.

"The fact of the Great Auk having formerly inhabited the British Isles has been one great cause for the steady advance in value of its eggs. The earliest record we have of a sale by auction is in 1853, when two fetched respectively £29 and £30, which remained about their value until 1860, when one sold for £60. In 1880 the price had risen to £100, followed in 1887 by £168 and in 1888 by £225.

"The egg which was sold yesterday, though not nearly such a good specimen as that sold in 1888, has an interest to all British ornithologists from having belonged to Yarrell, who purchased it in Boulogne of a fisherman who had been in a whaling ship. He had two or three swan's eggs and this egg on a string. Yarrell asked if they were for sale, and was told that the white eggs were one franc each and the spotted one two francs. Unfortunately we do not know the date of this transaction, but it was anterior to 1838, for in that year the egg was figured in Hewitson's 'British Oology.' After Yarrell's death it was sold at Stevens's auction-rooms for £21 (December, 1856), and purchased for the late Mr. Frederick Bond, an old friend of Yarrell's. It remained in this gentleman's possession until 1875, when it was sold with his unrivalled collection of British eggs to Baron Louis d'Hamonville of Château de Mononville, who sent it to Mr. Stevens."

ERRATUM.—At bottom of Plate IV, second line, for "preesing" read "preening."